State of California **Employment Training Panel**

M e m o r a n d u m

To:	Panel Members	Date:	June 26, 2003
From:	Ron Tagami, Manager Peter DeMauro, General Counsel	Analyst:	N. Weingart
Subject:	One-Step Agreement for **Indigo Systems Corporation** (www.indigosystems.com)		

CONTRACTOR:

- Training Project Profile: Retraining: Companies with Out-of-State Competition
- Legislative Priorities: Moving to a High Performance Workplace & Promotion of California's Manufacturing Workforce
- Type of Industry: Manufacturing Infrared Cameras
- Repeat Contractor: No
- Contractor's Full Time Employees:
  - Company Wide: 194
  - In California: 186
- Fringe Benefits: Yes
- Union Representation: No
- Name and Local Number of Union representing workers to be Trained: N/A

CONTRACT:

- Program Costs: $247,000
- Substantial Contribution: $0
- Total ETP Funding: $247,000
- In-Kind Contribution: $413,025
- Reimbursement Method: Fixed-Fee
- County(ies) Served: Santa Barbara
- Duration of Agreement: 24 months

SUBCONTRACTORS:

Advanced Infrared Resources, Yorba Linda, California (Amount to be determined ($TBD) for training)
California Institute of Technology, Pasadena, California, ($TBD for training)
Equipment Reliability Institute, Santa Barbara, California ($TBD for training)
Leslie Hammett Resource Management, Ventura, California ($TBD for training)
NETRINO, Sunnyvale, California ($TBD for training)
New Horizons, Oxnard, California ($TBD for training)
RAND, Encino, California ($TBD for training)
University of California at Santa Barbara, Goleta, California ($TBD for training)

THIRD PARTY SERVICES:

The applicant states consultant services have not and will not be used other than those specified in the Subcontractor Section.

NARRATIVE:

Indigo Systems Corporation is eligible to provide ETP training under Title 22, California Code of Regulations, Section 4416(a)(1,2) as a company engaged in manufacturing that meets the out-of-state competition requirements. The Contractor also meets ETP's funding priorities to develop workers with skills that prepare them for the challenges of a high performance workplace of the future, and that promote the retention and expansion of the state's manufacturing workforce as specified in Unemployment Insurance Code, Section 10200 (b)(3) and (7).

Established in 1996, Indigo Systems Corporation is a privately held company that designs, develops and manufactures custom integrated circuits, infrared cameras, bolometers, and custom infrared detector packaging. It employs 186 workers at its corporate office/engineering design center and two production facilities in Goleta, California. The company also has a newly acquired facility in Florida with eight employees. Products are sold to a wide variety of markets: automotive; security and surveillance; industrial; preventative and predictive maintenance; research and development; military and government; and telecom/spectroscopy systems. Indigo's customers include Northrop Grumman, Boeing, Texas Instruments, Lockheed Martin, Perkin Elmer, Corning, DRS Technologies, Wyle Laboratories, Spificon Laser Beam Diagnostics, MIT Lincoln Laboratory, Smithsonian Institution, and the Jet Propulsion Laboratory.

Initially, Indigo solely designed custom integrated circuits. As this business grew, the company began to manufacture infrared (IR) cameras. In 2002, Indigo Systems was awarded a contract with Autoliv, a tier-one supplier to the automotive industry for small IR cameras to be used in automobiles. That same year, Indigo won business from MSA for small IR cameras for firefighters. As a result, the company is growing at a rapid pace. Indigo's camera production has been continually increasing from five per month in 1999 to 200 per month in early 2003. This aggressive pace will continue until the company achieves a rate of 200 per day in March of 2005.

NARRATIVE: (continued)

For Indigo, the move to a high volume environment means a significant shift in how work is performed. Frontline workers and Managers must switch from an engineering mentality to a comprehensive production mindset. This conversion will require Advanced Technology engineering skill upgrades to focus on designing in quality and manufacturability and for custom software development; extensive manufacturing improvements to meet new production schedules; enhanced management skills to lead the effort and utilize staff resources more effectively; increased employee project and personal management and organizational skills; and new system and personal computer equipment to facilitate and support all activities more efficiently and effectively.

In order to institute the necessary changes while maintaining product quality and satisfying customer demands, Indigo must transition all of its operations into a high performance workplace. To facilitate this transition, the company will offer training in Continuous Improvement, Manufacturing Skills, Business Skills, Management Skills, Computer Skills, and Advanced Technology.

Continuous Improvement courses will include: ISO Conversion, Auditing and Quality; Supply Chain Management; Production & Inventory Management Control; Strategic Supplier Management; 5S Principles and Tools; Process Mapping; Analyzing Work Processes to Find Opportunities for Improvement & Elimination of Waste; Statistical Process Control; Understanding Variation; Evaluating the Measurement Process; Successful Experimentation; Problem Solving; Six Sigma; and Team Building Skills.

Management Skills training includes: Conducting a Collaborative Performance Review; Skill-Based Interviewing; Correcting Performance Problems; Empowerment; and Meeting Facilitation. This training is for Managers, Supervisors, Leads, and staff who oversee other workers.

Business Skills training includes leadership and personal development and communication skills such as: Identifying Work Priorities and Studying Verifiable Goals; Coaching: Bringing Out the Best in Others; Successful Negotiations; Proactive Listening; Influencing Win-Win Outcomes; Moving From Conflict to Collaboration; Effective Personal Productivity; Priority Management; Presenting Your Thoughts and Ideas; Program/Project Management; Product Management; Giving and Receiving Constructive Feedback; Developing Presentation Skills & Facilitating Q&A (questions and answers); and Business Writing.

Computer Skills training is comprised of Business Process Implementation Tools, Technical Applications, and Desktop Skills including: Sales & Marketing Database; Human Resource Information System; OMEGA Manufacturing and Test Database; DELTEK software; Lab View, MS Access Microsoft Exchange Server, Microsoft XP Professional OS (operating system), Microsoft SQL (systems query language) Administration; Web Application Programming; Word; Excel; PowerPoint; Access; Outlook; Windows Office XP; and Microsoft Project.

Manufacturing Skills training will be comprised of: Geometric Dimensioning & Tolerancing; J-STD-001 Solder Cert ESD (Electro Static Discharge) Certifications; Clean Room Standards and Protocol; Laser Welding; Wire Bonding Ricor Cooler Certification; Vibration Training; Shop Math; Introduction to infrared for non-technical staff; and How Detectors and Microbolometers Work.

NARRATIVE: (continued)

The Contractor will administer the Agreement.

Supplemental Nature of Training

Traditionally, training at Indigo has been done on an as needed basis. Training has been done both on- and off-site by in-house personnel and vendors. Manufacturing skills training has been given by an in-house, certified instructor. Vendors recently taught a new Manufacturing Systems course. The company has done only a limited amount of training to date because of its size and the excellent background and experience level of newer employees.

This year, however, Indigo is growing so fast that it must now hire people who do not necessarily have infrared experience. The company is also moving from low-volume to high-volume production, and implementing process and cultural changes that require company-wide training. Without ETP funding, training would be very limited in both the scope of subjects and the number of people that could be included. This would inhibit opportunities for success in the short amount of time that Indigo has to accomplish its production goals. Rather than hiring the best companies to come and teach employees, Indigo would send one-or-two people away and asking that they come back and share the knowledge. This is typically not effective in accomplishing widespread organizational change.

After ETP training, Indigo will continue company-wide training in many of the same areas found in the ETP curriculum. Indigo's newly established Organization & Employee Development Department will supervise these efforts based organizational goals and objects that are founded on a company-wide needs assessment.

In-Kind Contribution

Indigo's in-kind contribution to this program is $413,025 for trainee wages while in training.

COMMENTS:

Contractor agrees that during ETP-funded training hours, trainees will not produce products or provide services that will ultimately be sold.

No executive level staff that set company policy have been included in the Agreement.

Participants in this project meet the Panel definition of frontline worker under Title 22, California Code of Regulations, Section 4400(ee) except for 11 Managers.

COMMENTS: (continued)

Advanced Technology (AT) Training: The Contractor is requesting the Advanced Technology $20 per hour reimbursement rate for some of the curriculum modules. AT training will be provided to Mechanical and Tooling Engineers, Information Technology staff, and Quality personnel to meet new, more stringent automotive and military contract requirements for product design and software programming. Training courses involve Infrared Technology, Thermography, ReadOut Integrated Circuit Analog Circuit Design, Printed Circuit Board Interconnect, Pro-Engineering software, Mechanical Analysis/Modeling Software (ANSYS), Software Programming for Embedded Systems, and Visual Basic. These courses are highly technical requiring small classes of ten trainees or less to allow more individual attention and oversight from the instructor. Additional funding is needed to cover expenses resulting from the provision of small classes, the need for highly qualified instructors, and the high cost of materials.

Training under 40 hours: The Contractor is also requesting a waiver to the 40-hour minimum requirement for a small group of trainees. There are approximately 11 Facilities Technicians who will receive between 24 and 39 hours of class/lab training. Trainees will receive courses in Infrared Technology, How Detectors and Microbolometers Work, and Shop Math. These courses will allow them to carry out their current work assignments more effectively by providing in-depth knowledge about the facilities and equipment with which they work. Additional training for these employees will be provided in the future as work schedules permit.

PROPOSED ACTION:

Staff recommends that the Panel approve this One-Step Agreement, Advanced Technology training, and training under the 40-hour minimum if funding is available and the project meets the Panel priorities. This recommendation is based on Indigo's stated need to provide its employees with high performance workplace skills to enhance the company's ability to expand into new markets, to grow the business, and to remain competitive.

TRAINING PLAN:

Group/ Trainee Type	Types of Training	No. Retain	No. Class/Lab Videocnf. Hrs	No. CBT Hrs	No. SOST Hrs.	Cost per Trainee	Hourly Wage after 90 days
Retrainee Job 1	Advanced Technology, Business Skills, Computer Skills, Continuous Improvement, Management Skills, and Manufacturing Skills	152	24-200	0	0	$1,625	$12.00-$66.35

	Range of Hourly Wages $12.00-$66.35
	Prevalent Hourly Wage $37.50
	Average Cost per Trainee $1,625

Health Benefit used to meet ETP minimum wage: Although the company pays health benefits for its employees, the hourly contribution is not being used to meet ETP minimum wage requirements.	**Turnover Rate** 0%	**% of Mgrs & Supervisors to be trained:** 7%

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Menu Curriculum

Class/Lab Hours 24-200	
	Trainees will receive any of the following
	CONTINUOUS IMPROVEMENT
	ISO to ISO/TS Conversion (International Standards Organization)
	• ISO 9001:2000 Conversion Training "How to for Quality"
	• ISO 9001:2000 Conversion
	• ISO 9001:2000 Lead Auditor Training
	• ISO/TS 16949 Conversion Training "How to for Quality"
	• ISO/TS Lead Auditor Training
	• ISO 2000 to ISO/TS 16949 Conversion Training
	Process Improvement
	• Basics of Supply Chain Management/Certified in Production and Inventory Management (CPIM)
	• Strategic Supplier Management
	• 5S Principles and Tools
	• Process Mapping
	• Analyzing Work Processes to Find Opportunities for Improvement & Elimination of Waste
	• Focus on Waste/Just-In-Time
	Statistical Process Control (SPC)
	• Understanding Variation
	• Understanding SPC for the Manufacturing Industry
	• Evaluating the Measurement Process
	• Successful Experimentation…Making Industrial Experiments Work
	Problem Solving
	• Problem Solving: Kepner Tregoe
	• Six Sigma Overview
	• Six Sigma Black Belts
	Team Building Skills
	• Building a Foundation of Trust
	• Launching and Refueling Your Team: The Tools and Techniques
	• Consensus Decision Making
	• Making the Most of Team Differences

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	MANAGEMENT SKILLS
	• Conducting a Collaborative Performance Review
	• Skill Based Interviewing for Team Participation
	• Correcting Performance Problems
	• Max & Max - Empowerment
	• Meeting Facilitation Training
	BUSINESS SKILLS
	Leadership Skills
	• Identifying Work Priorities and Studying Verifiable Goals
	• Coaching: Bringing Out the Best in Others
	• Getting Yes Through Negotiation
	• The Successful Negotiator
	Communication Skills
	• Proactive Listening
	• Influencing Win-Win Outcomes
	• Moving From Conflict to Collaboration
	• Effective Personal Productivity
	• Presenting Your Thoughts and Ideas
	• Giving and Receiving Constructive Feedback
	• Developing Presentation Skills & Facilitating Q&A (Questions & Answers)
	• Business Writing
	Program/Project Management
	• Program/Project Management
	• Priority Management
	• Practical Product Management

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	COMPUTER SKILLS
	Business Process Implementation Tools
	• Sales & Marketing CRM (Customer Relations Management) Database
	• Human Resource Information System (HRIS)
	• OMEGA Manufacturing and Test Database
	• DELTEK - Engineering Change Order Module
	• DELTEK – MRP (Manufacturing Resource Planning)
	• DELTEK – Purchasing Module
	• DELTEK - Report Writing
	• Overview of Maintenance Factory Service Module
	Technical Applications
	• Lab View
	• MS (Microsoft) Access Microsoft Exchange Server
	• Microsoft XP Professional OS (Operating Systems)
	• Microsoft SQL (Structural Query Language) Administration
	• Web Application Programming (PHP, PERL, VB)
	Desktop Training
	• Word for Windows Level 1, 2, 3
	• Excel for Windows Level 1, 2, 3
	• PowerPoint for Windows Level 1, 2
	• Access Level 1, 2
	• Outlook Level 1, 2
	• Windows Office XP
	• Microsoft Project Level 1, 2
	MANUFACTURING SKILLS
	• GD&T (Geometric Dimensioning & Tolerancing) - Level 1
	• GD&T - Level 2
	• J-STD-001 Solder Cert ESD (Electro Static Discharge) Certifications
	• Clean Room Standards and Protocol
	• Laser Welding - Operation and Maintenance
	• Wire Bonding Ricor Cooler Certification
	• Vibration Training
	• Testing
	• Shop Math for Technicians
	• Introduction to Infrared (Non-Technical)
	• How Detectors (InSb, InGaAs) and Microbolometers Work

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	ADVANCED TECHNOLOGY
	• Introduction to Infrared Imaging
	• Advanced Infrared Imaging
	• Introduction to Thermography
	• Infrared Imaging (University of California Santa Barbara)
	• ROIC (Read Out Integrated Circuit) Analog Circuit Design
	• Printed Circuit Board (PCB) Interconnect
	• Pro-E (Pro-Engineering)
	• Pro-E Advanced
	• ANSYS (Mechanical Analysis/Modeling Software)
	• Software Programming for Embedded Systems
	• Visual Basic Programming: Beginning
	• Visual Basic Programming: Intermediate
	• Visual Basic: Advanced Object Oriented Programming Microsoft SQL Programming